

## ABSTRACT OF THE DISCLOSURE

Fluorine compounds such as  $C_2F_6$ ,  $CF_4$ ,  $CHF_3$ ,  $SF_6$  and  $NF_3$ , are made in contact with a fluorine compound decomposition catalyst and a catalyst the decomposition of at least one of  $CO$ ,  $SO_2F_2$  and  $N_2O$  in the presence of water or in the presence of water and oxygen. The catalyst the decomposition of at least one of  $CO$ ,  $SO_2F_2$  and  $N_2O$  preferably contains at least one selected from  $Pd$ ,  $Pt$ ,  $Cu$ ,  $Mn$ ,  $Fe$ ,  $Co$ ,  $Rh$ ,  $Ir$  and  $Au$  in the form of a metal or an oxide. According to the invention, the fluorine compound can be converted to  $HF$ , which is liable to be absorbed by water or an alkaline aqueous solution, and a substance, such as  $CO$ ,  $SO_2F_2$  and  $N_2O$ , formed by decomposition of the fluorine compound can also be decomposed.

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